

Marine Biology Labs

Beach survey

Our goal today is to relate biotic (living) communities to their abiotic (non-living) habitat type (in particular substrate and bottom type). Plants and animals are specifically adapted to where they live, and by grouping living things found on a beach, the observer can often gain great insight into what the underwater world just offshore looks like. Things found on the beach will fall into several categories – so be careful about the conclusions you draw:

- 1) They live on the beach (or in the sand)
- 2) They live just offshore and were thrown up on the beach by large waves
- 3) They drifted to the beach from somewhere else, and were washed up (this can give the observer some information about prevailing currents)
- 4) They were deposited there by humans or birds or other animals

Today we will perform a beach survey with the following objectives:

- To classify the habitat types just offshore
 - To group organisms by where they live (eg they live on hard bottom, soft bottom etc.)
 - To group organisms by lifestyle (eg. Are they sessile, mobile etc.)
 - To group organisms into major taxonomic groups (phyla)
 - To paint a picture of the habitat types in the area, understand the role of currents and substrate type, and the major forces that shape and influence the communities
1. List the major forces (living and non-living) you believe shape this area and the life just offshore. You will need binoculars, good observation and patience to come up with this.
 2. List the organisms you find and where you found them (eg. In the sand, on a rock, in a kelp holdfast)
 3. Determine what kind of habitat you think it lived/lives in, and if it came from near or far. Is there a dominant ‘lifestyle’ (eg. Infauna, epifauna, sessile, boring ec.)?
 4. Create a scenario of what it looks like offshore of the beach. Is this a depositional environment? Does it get influence from other communities?
 5. If there is time, group the animals by phylum, and determine what you think are the most dominant phyla.

Biotic forces (living)	Abiotic (non-living) forces

Organism/thing	Major characteristics	Where found	Lifestyle/habitat	Other (trash)

Organism/thing	Major characteristics	Where found	Lifestyle/habitat	Other (trash)